Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

62.09

THE AVOCADO

AND ITS FUTURE

BY

DR. H. B. STONEBROOK

APR 1 1924

A Treatise on the Development of
California's Greatest Horticultural Possibility

THE AVOCADO

AND ITS FUTURE

OF THE hundred million people who are residing in this country, very few are familiar with the avocado, its value or cultivation. This circumstance is easily accounted for, considering the lack of publicity and the comparative newness of the product, as it has only been in the last few years that the fruit has come into its own in popularity and growing interest.

The high food content of the avocado, considered in connection with the limited area in which it is grown, causes it to be rated first among commercial fruits in the ratio of returns per investment unit. This one feature alone promotes enthusiastic interest in the fruit world and lends added interest to the activities of those who are devoting their efforts in commercializing its future possibilities.

The avocado is undoubtedly destined to be universally known and consumed from the East Coast to the West Coast and from the Northern extremities to the Southern boundaries, as the avocado has received almost instant favorable consideration and adoption as a fruit of unequaled value. Ernest Braunton, in the Los Angeles Times, writing of the avocado and its future possibilities, says in part: "The orange is at its best but a confection, a pleasant fruit to eat, but the avocado is a food without a rival among the fruits, the vertiable fruit of paradise." Such publicity has a tendencey to whet the curiosity of the consumptive market and create a demand for its universal distribution.

When the owner of Avocado Acres, who has had fifteen years' actual experience in the development of the avocado to his credit, cast about for a suitable location where the avocado could be grown and developed under climatic conditions suitable for its successful culture, the present location was decided upon on account of its location, even climatic conditions and the high texture of the soil, which experiment proved highly suitable in the hearty development of the avocado tree. Primarily, nurseries were established on the tract for experimental work, and the success which was attained in this primary experiment proved conclusively its adaptation to the fruit. The results from the first plantings fully convinced the owner of the tract that the district was destined to become a noted center for the future growth of the avocado. Substantiating the prediction, some thousand acres in this costal region, and adjoining the owner's tract, have been platted for the future development of the avocado, and it is expected that within the next few years to come all lands in this immediate district that are now under other tropical cultivation will be utilized in the growth of the avocado on account of the higher productive features and the greater value commercially and financially. With the increasing popularity of the avocado, the question of over-production has received serious consideration. It is not

difficult to suppress any anxiety along this line, because of the limited areas in which the fruit can be grown. Unlike most tropical fruits, only certain districts are found to be especially adapted to the successful culture of the avocado. Even in California, with its evenly modulated temperature, just certain regions have proven applicable. Of these, the costal region in the vicinity of San Diego probably has gained more favor than any other in the entire state on account of the uniformity of the seasons and the evenly balanced temperature, which is neither too cold nor too warm.

In placing Avocado Acres on the market for the consideration of the prospective investor, we have taken into consideration the fact that few are familiar with the development of the fruit, and in order to promote interest and offer convincing evidence of our willingness to help contribute to your success in the undertaking, we are to maintain a reserve on this tract where a nursery will be conducted for the purchasers' especial benefit and instruction. This nursery will be under the personal supervision of an expert and his services will be at the disposal of those who accept the opportunity. The addition of this feature will eliminate the risk of experiment on the part of the tract purchaser and allows him to intelligently pursue a proven course that will expedite early and successful production.

For the benefit of those who are not familiar with the avocado and its commercial value, a brief history of the fruit might prove beneficial in centering your interest. The avocado originally was grown in Mexico, South America, Central America and West Indies. Later experiment in Southern Florida proved its susceptibility to that clime, and the success attained by those who pioneered in its early development in that state laid a foundation for a new agricultural possibility which the fruit growers were quick to appreciate. In California the development is new, yet old, for as early as 1856 trees were planted in San Gabriel, and in 1871 Santa Barbara is credited with the planting of a grove. In each case the experiment was greeted with success. However, it was more of an experimental nature than of commercial value. Not until it became generally known that the avocado trees in the vicinity of Orange, Monrovia and San Diego were bearing hundreds of fruits that were selling for as many dollars, did nurserymen and grow-

Two-year-old Avocado Tree on terrace. Notice pipe and hose bib for irrigating basin.

ers realize the tremendous possibilities afforded in the development of this new tropical fruit and its future commercial importance. In recent years hundreds of seedlings in various parts of the state from San Diego to Butte county have fruited, tens of thousands of trees of about eighty different varieties have been propagated and over two hundred and fifty acres have been planted in orchard form, not counting the numerous acre tracts that are daily gaining in popularity.

THE AVOCADO

In shape the avocado resembles the pear, and consequently is sometimes erroneously called the "alligator pear," and yet identifying it with the fruit world, it is decidedly different from any known fruit grown, being neither sweet nor acid. The avocados are of two kinds—the thin skinned and the thick skinned—both varieties are good. It may be said of the thin skinned variety that the trees are very hardy, bear earlier and bear a fruit that is rich and delicious. This fruit is, as a rule, smaller in size than the thick skinned ones. The fruit consists of an outer skin or rind, a central hard seed and the yellow edible portion between. The fruits vary in size according to the variety, and weigh from a few ounces to three pounds. In a point of food value the avocado practically outranks all other fruits. Its chief value as a food product lies in the fact that it contains a high fat value which varies from 9.8% to 31.6%. Digestion experiments show that the digestibility of the avocado fat is on a par with that of butter fat and not below that of beef fat. This finding makes the fruit highly of interest to the medical world, who are prescribing it as a diet and in cases of convalescence.

As before stated, there are numerous varieties of the avocado, as there are numerous varieties of other fruits. The tree itself is a broad leaf evergreen, oftimes growing to a great height and usually becomes productive in the third year, and in a good many instances after the second year of planting. Of the popular varieties, the Fuerte, Puebla, Spinks, Dickinson, Dutton, Perfecto and Sharpless predominate of the eighty-six varieties now grown in the state. Different varieties thrive better in different locations, therefore the variety is usually accepted as best fits the local conditions.

1. The FUERTE is the leading variety. The tree is very hardy, precocious and a strong grower. The fruit from the Fuerte varies in weight from 10 to 16 ounces, is pyroform in shape, with a dull green skin. This variety ripens from January to April, when the prices of the fruit are the highest.

2. The PUEBLA is one of the very hardiest and also one of the earliest. The flavor is very fine, skin nearly smooth and very dark purple in color. Ripens November to January.

3. The DICKENSON. This variety is one of the most widely planted, weighing from 14 to 16 ounces each. Skin very dark, rough and purple in color. Ripens May to September.

4. The SPINKS is universally accepted as the best summer fruit and the tree is a prolific bearer. Meat is of a rich cream color and exceedingly good flavor. Is a hardy type and ripens from March to October.

5. The DUTTON usually ripens in the early spring. This variety is popular for shipping on account of its keeping qualities. The shape of this variety is pyriform, slightly necked. Color is dark maroon, with many warts of lighter color. Very rich flavor.

6. LYON. By its upright, slender growth and comparative dwarf size, it is best adapted for close or inter-planting. The fruit averages one pound in weight, with a moderate size seed. Good quality and flavor; matures in spring. Fat content of 16, with the highest protein content of any variety. The value of the Lyon in early fruiting ,heavy and regular bearing qualities, is well known. An early bearing young tree should have the crop removed for first year or so to keep it healthy. April to August.

Three-year-old Bearing Avocado Trees in Orchard Form
Two hundred Fruits to Tree

7. DOROTHEA. Grown by A. W. Miller of Hollywood, from a seed of the well known Miller tree and believed to be a cross from one of the Mexican types. Vigorous and productive. Color light green with many yellow spots, skin leathery, flesh clear, attractive yellow. Good texture, no fibre, excellent flavor.

8. SHARPLESS. One of the best quality fruits. Good flavor and texture. Summer fruit. Tree not hardy.

9. LINDA. Round fruit, deep purple when ripe, flesh firm, color yellow. Fruit averages 2 pounds, rich nutty flavor, medium size seed. A good producer, tree unshapely and tender. July to November.

10. QUEEN. Pear shaped, corrugated skin, purplish maroon when ripe. Weighs 1 to 2 pounds. Tree a little hardier than the Linda. June to September.

11. BLAKE. Slender pyriform, with a rather long neck, sometimes curved. Length, about 4 inches, weight about 6 to 8 ounces. The skin is smooth, light green, with numerous yellowish dots. Flesh creamy yellow, smooth, of very rich flavor. Seed conical, rather small, often loose in the cavity. An analysis has shown that this variety contains 25% of fat. The tree is very hardy, moderately vigorous in growth, productive, the season October.

12. CHALLENGE. Form obliquely spherical, measuring about 4 inches in length and weighing 14 to 18 ounces. The surface is rough, dark purple in color, the skin thick and granular. The flesh is cream-colored, smooth, the flavor not so rich as in the very best varieties. One analysis has shown it to contain 9 per cent of fat. The seed is very large, spherical, completely filling the large cavity. The tree is a moderately strong grower with slender wood, difficult to bud. It is prolific and ripens its fruits from February to May.

13. NORTHROP. In form this fruit varies from obovate to pyriform, sometimes distinctly necked. It measures about 4 inches in length, and weighs from 4 to 7 ounces. The surface is smooth, glossy, purplish black, the flesh cream-yellow in color, fine, smooth, almost free from fiber, and of rich flavor, analyzing 25% of fat. The seed is medium-sized, tight in the cavity. The tree is very hardy, of vigorous growth, and has the habit of producing two crops annually, the main crop ripening in October and November, the second crop, which is much smaller, in April and May.

In all cases great care must be exerted in obtaining good trees, and those best adapted in the vicinity of planting. On our tract we maintain an experimental nursery where trees especially adapted to this particular climate are selected and maintained in stock for your convenience. Your tree must be strong. It must grow rapidly and erect, withstanding with like resistancy. cold, heat and wind. Your tree must be a true annual, bearing a full crop each year, and your tree must not only mature at least a portion of its crop early, but must be able to hold it on the tree for months after maturity, thus enabling you to select your own time and convenience for marketing. Trees cultured in the nurseries on Avocado Acres are chosen for their qualifications as to the above.

An even climate is necessary to its successful development, and one free from chilling temperatures or unusual moistures. Seedling avocado trees, like other fruit tree seedlings, can be relied upon to produce profitable crops. The desirable varieties are propagated by budding on ten or twelve months' old, hardy, Mexican seedlings grown in nursery rows for that purpose.

PLANTING SUGGESTIONS

Never lift the tree by grasping the trunk, but tilt it and put one hand under the ball, and support its weight from the bottom. Good, deep, wide holes should be dug. If the soil is shallow a charge of dynamite should be shot in the hole. If you are planting in adobe, it will pay to dig a large hole, and replace the dirt removed with a lighter soil. If possible, the hole should be filled with water and allowed to soak before the tree is planted. Later the tree should be placed in the hole, and the hole partly filled with earth (never use the dirt that comes from the hole, but use top soil) say to within two-thirds of the height of the ball, then the string holding the covering should be cut and the burlap laid flat on the ground and the hole completely filled, leaving a basin to be immediately filled with water. All trees should be settled with water. The bud should be just above the top of the ground when planted. Fertilizer should be worked in later. Trees should be shaded the first summer. If the branches are opening so that the mid-day sun can shine on the trunk and branches, trouble is sure to follow and the exposed parts should be either whitewashed or wrapped with burlap or paper. The bark of the young trees is subject to sun-burn, hence they should be trained with the idea of affording complete shade to the trunk and branches.

Trees should be watered frequently. In the nursery I water every week or ten days during the warm weather. The orchard would hardly require so frequent irrigations, but in well-drained soils it is hard to give the tree too much water, and there are few trees that will respond more freely to irrigation and care than the avocado.

Planting distances vary from twenty to twenty-five feet, the distance depending upon the habit of growth of the variety planted. Trees planted in California and are now bearing, practically assure a continuous supply of fruit during twelve months of the year. The greatest demand for the fruit in the Eastern markets seems to be in the fall and winter when other fruits appear hardest to obtain, although the avocado finds a ready market at all seasons, thanks to its increasing popularity. Fortunately, the avocado tree in California is practically free from serious pests and plant diseases which are usually quite common in the development of semi-tropical products. The only serious trouble that has been witnessed in the development of the avocado has been brought about by improper soil conditions and an undesirable climate. The essential requirement of the avocado tree as far as soil is concerned, is good drainage, although a sandy loam is preferable for heartier development. The moisture requirements are practically the same as those required by the lemon tree, yet when compared with the orange tree, or the lemon tree, the avocado tree requires the least attention and develops without an unusual amount of care.

THE AVOCADO FUTURE

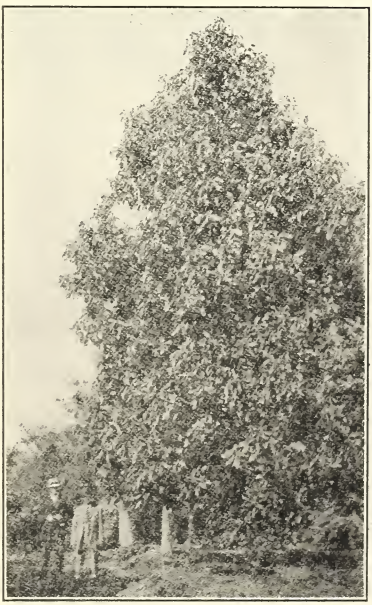
The avocado should not be considered as a salad fruit alone, but as a substantial food. Since the fruit is so much in demand and so palatable, little attention has been paid to the preparation of by-

products and as the fruit becomes more abundant, the smaller fruits will undoubtedly be used in producing pastes and oils for salad dressings, etc., and will offer another profitable field in the production of the avocado.

The avocado industry in California owes a great deal to the untiring efforts of the California Avocado Association, who has done much to bring the fruit from an uncertainty and place it alongside of the other great horticultural industries in the state. Each succeeding year finds the avocado occupying a place of greater prominence in the eyes of the consumptive market and with the unlimited amount of publicity that is being given the fruit and its development by the departments of agriculture in the various universities ,agricultural journals and the press, it is the concensus of opinion that in a few years to come the avocado industry in California will equal in prominence and financial revenue that of any other product grown in the state.

This statement may seem a bit broad to some, however, when it is taken into consideration the possibilities over other products grown in the state, the statement will not appear so bold. The present market value of the avocado, retail, ranges from thirty-five to seventy-five cents, depending on the size and variety of the fruit. The average price received from a crop of avocados is about $7.00 per dozen, or an average return of about $2,166.50 per acre, per crop, and it must be taken into consideration that the avocado is a twelve-month product. These figures are based on the planting of forty trees to the acre. With a ten-year old grove, planted with forty trees to the acre and figuring 300 pounds of fruit to the tree, the production of each acre would be 12,000 pounds, and with a conservative estimate of 25 cents per pound, would net the acre crop $3,000. Many trees show returns far in excess to the above figures.

Owing to the fertility of the soil and the abundant space between the rows of trees, a good many growers utilize the space in the raising of rhubarb and mid-winter vegetables. Returns of rhubarb furnish an attractive incentive that has prompted its popularity among avocado growers in this region, as the growing requirements are practically the same as those necessary in the development of the avocado, not men-



Five-year-old Avocado Tree, Bearing Over 400 Fruits.

tioning the fact that an ever ready market is found waiting to utilize the production.

A little concentration on the future of the avocado will serve to convince the most skeptical that the industry is one well worthy of their earnest consideration as well as appreciate the statement that in the near future the avocado will successfully rival the orange for horticultural supremacy.

Therefore, after you have completed reading this little booklet, I am sure you will sincerely agree with me when I say that the fertile areas of Southern California are preparing to enter into the consumptive market of the United States, a great new fruit product, the possibilities of which are limited only to the extent of the efforts expended.

No matter what your present status in life may be, if you are looking for some means of a lucrative income, free from the ordinary risks taken from an investment standpoint, I would earnestly suggest that you give your serious consideration to the development of the avocado, and that at an early date. In a few years, when the industry has grown to such proportions and has reached its peak in prominence, avocado land will naturally grow scarce and values double.

In conclusion, I would invite your attention to the generous sale plan which we have inaugurated. Our terms will allow those even in the most conservative circumstances to avail themselves of the opportunity to enter into this promising field. Your success is our success, and after you have established yourself on one of these tracts we still maintain a keen interest in your success and stand ready at all times to lend our assistance in this direction by giving advice and placing our knowledge at your service.

Two-year-old Avocado Tree, showing Basin and Mulch

If you maintain a doubt as to your future prospects in life, get in line with the avocado interests and establish a foundation for your future independence. There is no time like the present. The forthcoming year will abound with opportunities, and those who are far sighted enough to visualize will accept the proffered opportunity without additional inducement and number themselves among those who are already well on the way to success and contentment.

AVOCADO RECIPES

Avocado Sandwiches—Mash the flesh of the avocado with a fork, or press through a sieve, add a sprinkling of salt and spread thickly between thin slices of bread. Rye bread makes a good combination with the avocado.

Avocado on the Half Shell—Cut the fruit in two and remove the seed. Serve one-half to each person, or if the fruit is quite small, serve both halves with such dressing as may be preferred.

Avocado Salad—Cut the fruit into thin slices or into small cubes and serve on lettuce leaf. This dish may be garnished with a slice of red tomato and a slice of lemon, or with celery and sweet red pepper, and served with any desired salad dressing.

Avocado on Toast—Mash the flesh of the fruit and spread thickly on small squares of hot toast. Salt and pepper.

Avocado Cocktail—Cut the ripe avocados in dice; mix equal parts of lemon juice and tomato catsup with salt and pepper to taste (dessert spoon to each cocktail glass). Pour on diced avocado and serve cold.

Avocados add an exquisite flavor to soups and gravies if cubed and added to these dishes just before serving.

Avocado Ice Cream—(1) One gallon cream, one pound sugar, pulp of sixteen medium sized avocados. Rub avocados through a sieve, add to cream and freeze. (2) Yolks of five eggs, one quart milk, green maraschino cherries, two cups sugar, four medium sized avocados, almond or vanilla extract. Make a boiled custard of milk, eggs and sugar; flavor. When cool, add the fruit and freeze. A maraschino cherry on top of each dish is an attraction.

Prepared by the California Avocado Association, a mutual non-profit society devoted to the interests of the avocado industry.

"The Avocado is undoubtedly destined to equal the Orange in horticultural supremacy in the State."